



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,201	08/17/2001	Jennifer Ambrose	M8540/250222	4944

23370 7590 05/27/2004

JOHN S. PRATT, ESQ
KILPATRICK STOCKTON, LLP
1100 PEACHTREE STREET
SUITE 2800
ATLANTA, GA 30309

EXAMINER

TAMAI, KARL I

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/932,201

Examiner

Tamai IE Karl

Applicant(s)

AMBROSE ET AL.

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,8,10,12,13,17,19-21,30,31 and 35-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,8,10,12,13,17,19-21,30,31 and 35-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Drawings

1. The objection to the drawings under 37 CFR 1.83(a) is withdrawn.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 2, 4, 5, 8, 10, 12, 13, 17, 19-21, 30, 31, and 35-39 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. The specification does not have a written description of the core and magnet both being thermosetting resin. The examiner notes that the specification and claims as filed do not support the core being thermosetting, only electrically insulative.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 4, 19, 21, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furuya et al. (Furuya)(JP 08-223889) and Kageyama et al. (Kageyama)(US 6,369,484). Furuya teaches a commutator with a permanent magnet chemically bonded (integrally formed) with the barrel commutator core (Figure 5c). Furuya does not teach the resin being a thermosetting resin or the commutator segments being metal/copper with anchors. Kageyama teaches a thermosetting core 12 and a copper shell 31, with radial anchors 21. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the commutator of Furuya with the thermosetting commutator with the anchors and metal commutator segments of Kageyama to be inexpensive and reliable.

6. Claims 35, 36, 37, 5, 8, 10, 12, 13, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furuya et al. (Furuya)(JP 08-223889) and Kageyama et al. (Kageyama)(US 6,369,484), in further view of Kawashima (US 4,678,616). Furuya and Kageyama teach every aspect of the invention except the magnet being a powder resin. Kawashima teaches thermosetting powder resin magnets with strontium or barium ferrite magnets are commonly used in magnetic devices. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the commutator of Furuya and Kageyama with the powder magnets of Kawashima because the magnets are reliable and resist chipping, and because selection of the material based on intended use is within the ordinary skill of the art (See *In re Leshin*, 125 USPQ 416).

7. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furuya et al. (Furuya)(JP 08-223889), Kageyama et al. (Kageyama)(US 6,369,484), and Kawashima (US 4,678,616), in further view of Uchiyama (JP 11-252,866). Furuya, Kageyama, and Kawashima teach every aspect of the invention except the magnet being mounted to the face of the commutator. Uchiyama teaches an annular magnet mounted to the face of the commutator. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the commutator of Furuya, Kageyama, and Kawashima with the magnet mounted to the face of the commutator as in Uchiyama to provide a small thickness in the motor.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furuya et al. (Furuya)(JP 08-223889), Kageyama et al. (Kageyama)(US 6,369,484), and Kawashima (US 4,678,616), in further view of Marsal (US 2,645,732). Furuya, Kageyama, and Kawashima teach every aspect of the invention except the conductive commutator shell being carboneous. Marsal teaches the commutator are carbon because carbon forms a strong bond with the resin when heated (col. 2, line 4). It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the commutator of Furuya, Kageyama, and Kawashima with the commutator being carboneous to provide a strong connection with the resin core, as taught by Marsal.

9. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furuya et al. (Furuya)(JP 08-223889), Kageyama et al. (Kageyama)(US 6,369,484), and Kawashima (US 4,678,616), in further view of Adler (US 5,850,141). Furuya, Kageyama, and Kawashima teach every aspect of the invention except the sensor being a variable reluctance sensor. Adler teaches the equivalence of the hall sensor and the variable reluctance sensor for determining rotor speed. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the commutator of Furuya, Kageyama, and Kawashima with the sensor being a variable reluctance sensor to determine the rotor speed with a passive sensor, and because it is within the ordinary skill in the art to choose between known equivalents.

10. The rejection of the pending claims over Nishimura and Vig are withdrawn.

Allowable Subject Matter

11. The Allowance of claim 39 is withdrawn, in light of the specification not supporting the claimed subject matter, that being the core and magnet both being thermosetting resin.

Response to Arguments

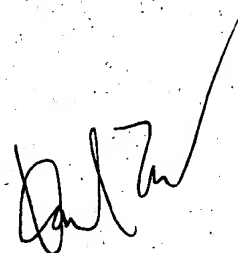
12. Applicant's arguments filed 10/24/2003 have been fully considered but they are moot in view of the new ground of rejection.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (703) 872 - 9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karl I Tamai
PRIMARY PATENT EXAMINER
May 25, 2004



KARL TAMAI
PRIMARY EXAMINER